HOME-MADE WRINKLES IN POULTRY APPLIANCES SAVE MANY A DOLLAR

Small Poultrymen Can Make Appliances and Repairs That Help in Year's Profits.

Single Comb Brown Leghorn One of America's Earliest Breeds

BY MICHAEL K. BOYER
Poultry Editor of The Farm Journal.

If your capital is limited you want to be economical about fitting up and keeping your poultry plant in repair. There are dozens of home-made devices you can use that save not only time and money, but are best adapted to your individual needs.

For instance, a spool is as good as a pulley for many purposes. Sometimes you can't find your staples—a bent nail is just as good. Or you want to stretch wire fence where there are few posts. A heavy wire run through the fence mesh will hold it up with few posts.

These are things worth knowing, and yet they might not occur to the less-experienced poultryman unless pointed out to him.

Mr. Boyer has been through the mill, and in his article this week points out many wrinkles any one can grasp and adopt.

The Single Comb Brown Leghorns shown herewith are members of that famous breed, one of the earliest imported to America.

The small poultryman generally is a man of limited capital. He cannot afford much expenditure of money, and consequently endeavors to manufacture with his own hands what is needed. While these "fixtures" may be crude, at the same time they serve the purpose.

Probably a pulley is needed to carry a rope that is fastened to a window, and which is intended to raise and close a window, or open and shut the small door that is used as an exit by the fowls. But there is no pulley to be found about the place, and a spool is used instead. It is done in this fashion: An ordinary wooden spool (which comes with thread on it) is fastened to a beam, rafter or some other object by using a wire nail. This nail is run through the opening of the spool and driven into a solid object as stated. When the rope or cord is drawn over the spool the latter revolves and the same effect is had as with an iron pulley.

It is necessary to put up some wire-netting fencing, and at the 11th hour it is discovered that the wire staples have been mislaid or all used up. Something must be done. It will be found that small lath nails driven in the post, and then bent over will serve the purpose of staples, and some people prefer this substitute to the staple.

There is a long stretch of wire-netting fencing to be put up, and posts are scarce. The purpose will be served by running heavy wire through the mesh and tacking it onto the top of the posts. This will hold up the wire and the posts can be from 16 to 32 feet apart, which will be a great saving.

HOW TO FIX A GATE.

Strong winds play havoc with the gates in the yards, and every now and then they are blown open, due to the fact that this continual shaking loosens up the buttons. There will be no danger if wire is used in place of the buttons. This wire should be run through the frame of the gate, a small gimlet hole being first made, through which the wire is passed, and then bent over, on each side of the gate, so as to form the letter "U." The bottom of the letter "U" represents the part that goes through the frame of the gate, and the sides of the latter are the parts that come down on each side of the post. This holds the gate firm.

Little chicks get into the feed troughs and scratch out and waste considerable of their feed. This can be avoided by having feed troughs closed so the chicks cannot get on the inside. Then on each side of this trough, inch holes are bored and the holes a distance of an inch apart. When the chick wants to feed it runs its head through one of these holes and helps itself.

In feeding whole cabbages to the fowls, so much is lost when the cabbage is thrown on the floor. This can be overcome by taking some two-inch wire netting, and forming a regular pocket. This pocket can be suspended from the ceiling by a rope, and hung about two feet from the floor so the hens must jump up at it. The mesh being two inches, the hens can readily get at the cabbage, and none is wasted.

STOP ROOSTERS FROM FIGHTING.

The cock birds get fighting through the fence. A vigorous male on one side of the fence, and an equally spunky one on the other side, are almost sure to have a terrible battle. Coming with great force against the wire they not only cut their combs, but very often so injure themselves that their days of usefulness are ended. There is a way of stopping it. Have a double fence. On the one side erect a three-foot-high fence, about six inches away from the main one. After several unsuccessful attempts to reach each other, these "lordly knights" will give up the challenge, and there will be no further trouble. It is worth more than the cost of the additional wire netting to do this.

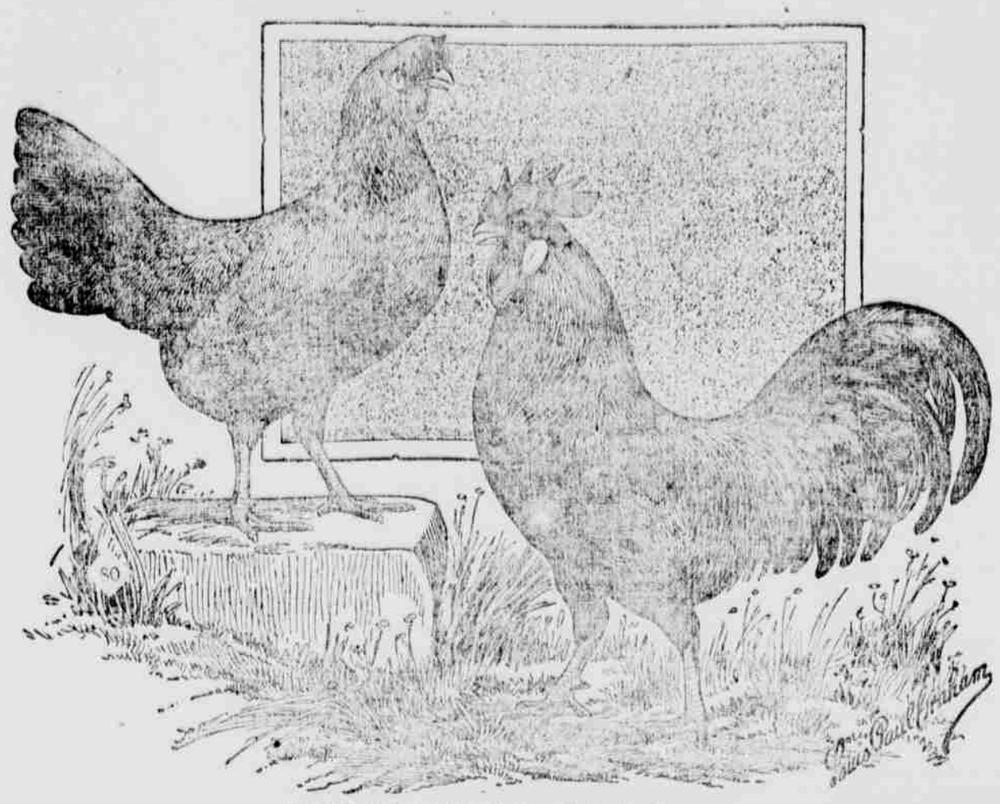
The setting hen in the regular laying house is not only a nuisance, but a breeder of lice. The way to overcome this anxiety, and at the same time give the hen a more natural nest, and keep down the army of lice, is to have a place outdoors for broody hens. Take a barrel and lay it on its side. To keep it from rolling, dig out some dirt so the barrel will lay in a shallow ditch. The excavated dirt can then be placed in the barrel, and a nest hollowed out with the hand. In the hollowed-out nest place tobacco stems instead of straw. Over the barrel have heavy roofing paper, which will keep out the rain. In front of this barrel nest place a lath run, using the full length of the lath, and each lath an inch apart. After the hatch is over, the nesting material can be removed, and the barrel will become an excellent brood coop. Such a place for the hen and her young chicks is preferable to any other style of chick coop, and will be more sanitary.

Fowls can stand considerable cold weather. In proportion to size they can stand considerably more than can mankind. But where there is a large house, and the weather, especially at night, is bitter, the fowls need extra attention, just as we need an extra cover in bed on such nights. Now for the fowls, that "extra cover" can be had in suspending a curtain in front of the roost at night. This curtain can be made of ordinary bagging or burlap. Tack one end to the ceiling, and in daytime roll it up. At night, after the fowls have gone to roost, let the curtain drop down. It should be long enough to reach to about a foot from the ground. It also should be hung so that it will be a foot away from the roost. This will give ample space for the fowls to jump down the first thing in the morning. This curtain arrangement will mean a great prevention from frosted combs and wattles.

Summer and winter it is best to feed the mash food indoors. This, of course, should be fed in troughs, and after the fowls have finished their meal this trough should be gotten out of the way, or the fowls will roost on it and get it befouled. The writer has found the V-shaped troughs the best, and in the end of the trough, on one of the sides, he fastens a hook. After the fowls have finished the trough is then fastened to the wall—the hook being inserted in an eye that has been fastened to the wall. In this way the fowls have more room, and the trough is kept clean.

Hundreds of little wrinkles similar to these given, will crop up in a poultryman's experience, which will save both time and money, and it is worth while for every one to study up devices that will not only make the work more easy, but which will add interest to the occupation.

Next week Prof. J. Harry Lewis, head of the New Jersey State Experiment Station, Department of Poultry Husbandry, Rutgers' College, New Brunswick, will contribute the first of two article on "Incubation." The illustration will be "Pekin Ducks."



SINGLE COMB BROWN LEGHORNS.

The Single Comb Brown Leghorn was one of the original breeds introduced in [illegible] about 1830. It has a reputation for heavy laying, and reaching the laying period at an early age. The hens are non-sitters.

This variety is much admired for its beautiful plumage and is widely bred by lovers of fine poultry, and is also sought after by those seeking good layers and early broilers, especially squab broilers. Their eggs are white and larger than those of some other Leghorns.

A Beautiful Type of Fowl.

Opinions differ as to whether the original Leghorns, as imported from Italy, were black or not, as, according to some authorities, other colors are to be found.

The variety, however, first appeared in America about 1835. It has always had a reputation as an excellent layer and a non-sitter, making it necessary to use hens of other breeds for sitting purposes or to employ artificial methods. In plumage, the males have rich red and green feathers and the females soft brown.

They are bred widely by fanciers and by farmers, too, meeting the respective demands of each class, being used to improve the general quality of flocks. In this way they have formed the foundation of a number of well-known American breeds, notable among the best layers.

ATTAIN GOOD WEIGHT.

The hens weigh as much as 5½ pounds, although 5½ pounds is a better average. Males go as high as 8½ to six pounds. The eggs are larger than those of other Leghorns, and some high-laying records have been credited to this branch of the Leghorn family. The chicks are rapid growers and are easily raised.

They are, however, difficult to confine and generally have to be fenced in by high fences or kept in by clipping their wings. This is due to their love of free range, on which they thrive well. Notwithstanding these drawbacks, the Brown Leghorns make an excellent home flock to supply fresh eggs and meat for the table.

To the breeder they offer excellent opportunities for the exercise of skill and care to get fine results. In fact, some notable exhibits have been seen of Brown Leghorns raised in back yards.

THE IMPORTANCE OF HUMUS.

What Is Humus and Why Needed.

W. H. STEVENSON,
Iowa State Agri. Experiment Station.

All soils that are really productive contain decaying roots, leaves and animal life. We call this partly decayed organic matter humus. This material is the life of the soil. It is impossible to grow good crops unless the soil is well supplied with humus.

Humus has many functions in soils. It makes heavy soils open and porous, and this promotes aeration. Clay soils are especially benefited from the standpoint of these changes. It increases the water holding power and thus is an important factor in making sandy soils productive. It supplies the bacteria of the soil with food. These bacteria are indispensable because some of them make the nitrogen of the soil available for plants, while others fix atmospheric nitrogen in the soil and render it available as a plant food. Humus gradually decays and liberates carbonic acid gas. This acts on the minerals of the soils and liberates at least a small portion of the plant food which they contain. As a rule dark colored soils contain a considerable amount of humus and are fertile.

PLANTS SUPPLEMENT MANURES.

If there were an abundance of manure on all farms, the problem of keeping soils supplied with organic matter and humus would be easily solved. All that would be required would be the application of the manure to keep all the land supplied with organic matter. But there will never be enough of this material because all of the soil products of the farm cannot be fed to animals. The human race must have other food than milk and meat. Therefore we must depend upon plants to supplement manures and furnish an adequate supply of humus. In some cases we may use only their roots and stubble; often the entire plant will be plowed under.

If only a limited amount of manure is available it is often advisable to use it to grow some clover or other crop to plow under. When used in this way more humus is secured than would be the case if the manure were used directly. In general the clovers are the best plants to grow for a supply of organic matter. There would be practically no limit to the amount of this material which would be available if farmers would put their lands in shape to grow clover successfully. This crop in recent years has been failing more and more, and land has become deficient in organic matter, and has unproductive. Drainage, fertilization and use of lime will help many farmers to get the clover they must have in order to keep their soils stocked with humus.

WHY EUROPEAN FARMERS CO-OPERATE.

Their Reasons and Methods.

R. H. HIBBARD,
University of Wisconsin.

The question is often asked why European farmers co-operate while American farmers struggle along unorganized. It is not because of any fundamental differences in the men, but rather to the widely different conditions under which the farming of Europe and that of America is done. The European farmer was in desperate circumstances. Something had to be done. For example, the hard times of the middle of the 19th century left the German farmer in a fair way to lose the ownership of his farm, for he was without money and almost without credit. Fortunately a wise and benevolent man started a co-operative credit company and so marked was its success that there are to-day over 15,000 such companies alone, and they are still increasing in numbers at a rapid rate.

In the dairy business there was a similar cause for the development of co-operation. In Denmark, for example, there was no adequate market for the butter made on the farms. It was necessary that something be done, and about 20 years ago the Danes adopted the co-operative system of butter making which had been tried both in the United States and in Germany, and have made it one of the remarkable examples of agricultural co-operation in the world. Butter is one of their main products, and, finding it almost impossible to market it otherwise, they learned to market it so successfully co-operatively that Denmark, only one-third as large as the State of New York, and with a population equal to that of Iowa, exports $5,000,000 worth of butter a week.

SUCCESS DUE TO SEVERAL CAUSES.

The success of co-operation in Europe, though due in the main to the dire need of the farmer, compelling him to submit to regulations not always to his liking, is due to other circumstances as well. For one thing the European farmer is permanently located and rarely sells one farm and moves to another. This gives him stability which an American community seldom has. Again the European farmers live in villages and are near neighbors, with all that that implies. No doubt, too, the European farmer is more inclined to submit to authority than his American brother who is traditionally independent. Finally, the European farmer has been willing to follow the leadership of men who have made it a life work to improve agricultural conditions, whereas the American farmer will not readily follow leaders of his own type.

SPRAYING FOR SAN JOSE SCALE

The Only Way to Overcome Pests.

H. W. DOYLE,
Department of Agriculture, Kansas.

Look for a flattened circular scale about the size of the head of a pin. The color is almost or quite black, with a ring near the center, on the inside of which may be distinguished a small nipple. The multiplying powers of the San Jose scale are enormous. They lie flat against the bark, skin of fruit or leaves of trees and rapidly cover the entire plant with a continuous layer of minute scales. Each scale sucks sap through a tiny beak. Fruit and scales cannot grow on the same tree. Young trees succumb. The San Jose scale is especially fond of the peach, currant, plum, pear and apple.

Hopelessly infested trees should be cut down and burned completely. A very effective spray, which also destroys peach leaf curl, apple scab and other fungous diseases, is one consisting of twenty pounds of quicklime, fifteen pounds of flowers of sulphur and fifty gallons of water.

PREPARING THE LIME AND SULPHUR.

With a little water mix the sulphur into a thick paste in a separate vessel. Place the lime with about ten gallons of warm water in a thirty gallon iron kettle over fire. Add water as needed to keep the slaking lime from sputtering, stirring frequently. When the lime is broken up into a pasty mass add the sulphur. Then boil for an hour, adding hot water from time to time. When the color changes to clear brown remove from the fire and add hot water to make fifty gallons. Stir and strain through burlap or an iron or brass strainer with at least twenty threads to the inch. Use while warm. In using lime provide covers for the horses for protection against the spray. Old cotton sheeting or bags sewed together will answer the purpose.

Apply in the spring just before the buds open. Before spraying is attempted trees should be severely pruned and all loose bark scraped off. Absolute thoroughness in covering all scales is necessary because the spray kills by contact only.

In orchards of 100 trees or less a good spray pump with a large air chamber, mounted on a fifty gallon barrel, will answer the purpose. All working parts should be of brass. It should be fitted with a twenty foot hose, an eight to twelve foot extension rod and a nozzle that will throw a fine, misty spray. At least two men will be required to operate the apparatus, one to pump and the other to manage the hose. Large sprayers with gasoline engine power are used in big orchards.

REARING THE CHICKS.

Interesting but Exacting Work.

E. K. PARKINSON.

With the hatching of little chicks the arduous duties of a protector, a dietitian and a family physician rolled into one, all begin at once. For the would be poultry raiser must have ceaseless vigilance and boundless patience, as the troubles of chickhood are quite as numerous as those of youngsters, and success depends upon inherited constitutional vigor, comfort, such as freedom from lice and plenty of room in which to exercise, food of the right kind and in the right quantities and protection from weather accidents and natural enemies.

The first three or four weeks are the critical periods and protection is very necessary, embracing as it does the safeguarding against overheating, cold and storms, rats, cats, weasels, hawks and such accidents as drowning, smoking lamps and pugnacious mothers.

If the chicks are to be reared by hens provide large, safe coops, with board floors and weather tight roofs and sides. Allow room enough for the mother to have an outdoor run, where she may dust herself and exercise properly. Don't be afraid of using disinfectants in and about the coops and brooders; also be keenly on the lookout for head lice, for these little pests will fasten on the heads of the chicks and gradually suck their blood until they die. Another ailment common among flocks of young chickens is leg weakness, which is chiefly caused by using feed lacking in proper bone and animal matter and too close confinement in overheated brooders.

GAPES AND OTHER TROUBLES.

We all have had more or less experience with gapes caused by a small Y-shaped worm about half an inch long, which fastens itself to the interior walls of the windpipe, weakening the chicks by sucking their blood and eventually causing strangulation, but by moving the chicks frequently to new ground, keeping them off the wet grass and, for emergencies, having on hand some good gape remedy, this pest may be easily exterminated. There is also another disease the chicks are heir to, which is white diarrhea. Its distinguishing characteristic is a sleepy appearance, dropping wings, rough feathers combined with diarrhea. This disease may be brought in by infected breeders, poor eggs for hatching or by baby chicks themselves. Where chicks are badly infected destroy them at once. If only one or two seem afflicted disinfect the brooders, coops, feed, water dishes, etc., and use one of the standard remedies.

BUTTER SCORING EXHIBIT.

The butter scoring exhibit, one of the features of the newly established extension service of the University of Vermont and State College of Agriculture, is for the purpose of bettering the quality and profit from Vermont butter. Butter makers, both creamery and dairy, are invited to send in samples of butter quarterly accompanying the butter with a method blank furnished by the extension service. The butter is scored and criticised by the judges and a letter written to each, giving his individual scores, also criticisms, and suggested means by which improvements may be made.

The figures for the first educational butter-scoring exhibit held January 23 have been tabulated, furnishing some very interesting data regarding the quality and methods used in the manufacture of Vermont butter. Orrin Bent of Boston, A. A. Borland, professor of dairying at the State agricutural college, and W. B. Ayers, State creamery inspector, were the judges. The averages of the 28 butters exhibited were as follows:

	Perfect score	Average score.
Score on flavor.....	45	38.8
Score on body.....	25	24.2
Score on color	15	14.8
Score on salt.....	10	9.7
Score on package.....	5	5.0
Total.....100		93.1

The average salt content was found to be 2.8 per cent, and moisture 11.9 per cent. The highest score of 97.2 was made on a sample sent from a creamery where the butter maker practiced more than ordinary care in grading and ripening his cream. A more complete summary of scores and methods will be published later.

The next exhibit will be April 23. All interested should write Thomas Bradlee, director of the extension service, for further information.

ORCHARD FARM CHANGES SUPERINTENDENTS.

On account of the ill health of his wife, W. H. Ledoux, for two years superintendent of the Orchard farm of the Eastern Fruit and Nut Orchard company in Grand Isle, has resigned his position and on April 1 will return to his market garden farm in South Burlington.

The management of the Orchard company has secured the services of N. W. Van Clave of Spokane, Wash., for two years, and he has arrived in this city to assume charge and move on the farm April 1.

Mr. Van Clave is an orchardist of experience in the great apple region in the Northwest, made famous by the perfect red apples it grows and furnishes to a well-nigh world-wide market. Believing that the East furnishes on the whole a much better opportunity for commercial orcharding than the West, especially when markets are considered, Mr. Van Clave decided to dispose of his five years old 60 acre apple orchard in the Yakima valley, Wash., and to locate in the East. It is a matter of no little consequence to Vermont that this well informed orchardist decides that of all the East, Champlain valley offers the best opportunity. In this decision he reflects the conviction of many of the best informed orchardists of the country.

In order to come East Mr. Van Clave resigned the position of inspector and field manager of the Spokane Apple Growers' association. The membership of this association operates over 30,000 acres of orchards.

THE DRIFT IN CHICAGO.

In the election of 1912 Mr. Roosevelt led Mr. Wilson by more than 35,000 votes in Chicago. He had a plurality of 51,000 over Mr. Taft, the total progressive vote being more than twice that polled by republicans.

In the Chicago city primaries of this year the republican men voters outnumbered the progressive men voters by more than six to one.

What other construction can be placed upon this record than that the great majority of the men in Chicago who voted for Mr. Roosevelt in 1912 have returned to their allegiance with the Republican party.—New York Herald.

IN SUNNY CALIFORNIA.

(From the Dallas (Tex.) News.)

Ten thousand extra men are now at work in southern California repairing the damage recently done by the floods. The Southern Pacific railroad alone is said to have 2,000 emergency men at work, the city and county of Los Angeles a similar number. Evidently it rained some in sunny California.

NO PLACE TO THROW STONES.

More than a thousand tons of glass will be used in the construction of the buildings at the Panama-Pacific international exposition, 550 tons having already been contracted for to be used on eight of the main exhibit palaces. In the machinery palace alone there are 28,000 panes of glass in the facades now installed and 65,000 square feet of glass in the skylights.

SCHOOL AND COMMUNITY

Their Needs the Subject of Conference at the University.

Archibald C. Hurd and Prof. George G. Groat the Principal Speakers at Second Day's Session—Luncheon, Reception, Banquet.

The second day's session of the ninth conference of the schools of Vermont with the State university opened at the Williams Science hall Friday morning with a large attendance, in fact much larger than was expected. About every section of the State was represented. The morning session was given over to the subject of "The School as a Social Center." The topic was intelligently and interestingly dealt with and by people who knew whereof they spoke. Archibald C. Hurd, who is regarded as an expert, through his activity in Windsor county, where he has been identified with the Y. M. C. A. movement to reach the community life in the smaller towns through the medium of the schools, made the principal address and gave first hand evidence of what has been accomplished and indicated what may still be done. Miss Caroline Woodruff of St. Johnsbury discussed the subject from the teacher's viewpoint and Mrs. George H. Smilie of Montpelier, who is president of the State Federation of Women's Clubs, enlightened her audience from the viewpoint of the patron of the school as a social center. Superintendent E. A. Hamilton of Newport told how the school superintendent regarded the subject and how he could be useful in promoting the movement.

Mr. Hurd said that many had regarded the church as the proper place for a community center but it had been found that there were factions which could not possibly be combined in a community church, but schools representing the children of every type of faction and people are the logical centers for the expression of community thought. In the past the schoolhouses had been the social centers. He said he had often heard his mother tell of the many things that had been said by people and the many events which happened in the school where she was a teacher. When he visited the building he was surprised to find that it was a very small structure, scarcely able to accommodate 12 or 14 adults. Still, he was convinced that his mother could really have written a book about what had happened within its walls. Now the school has narrowed its scope of activity, which is deplorable, as there is no single institution that so cheapens community life as a poor school. To cause a return of former conditions the people of the community must be reached through the children of the schools and among ways of doing this are to have increased social activities in the school building, a circulating library on agricultural topics there, holding fruit shows and agricultural fairs and conducting the lyceums of the community under the auspices of the people themselves with speakers from the people.

The experience in Windsor county has shown that an inexpensive course could be provided whereby there might be five or six lectures at the schoolhouse during the winter at the price paid to a single speaker from the outside. The boys who work day times and who have been wont to sit on the cracker boxes in the country store in the evening, have been interested in night schools where civics, English and business arithmetic are taught. It has been found that circulating libraries are most effective when circulated through the schools. School gardens and improvement leagues are also helpful in connection with improvement leagues. Mr. Hurd suggested in connection with improvement leagues that camera clubs be formed in the schools and said that the experiment would be tried in Windsor county. The idea would be for the pupils to take an exploring tour around the neighborhood, some with camera and some with pad and photograph and note conditions of wells, fences, buildings, etc., the material gathered to be worked up in a lecture and the pictures taken shown on the screen. This would be more effective than the work of a health officer ever could be. He spoke of the value of dramatic societies, Arbor day exercises, meetings of farmers' clubs, corn shows, etc., all to be a part of the school life and the school buildings to figure in each enterprise. He related how in his own county that in the basement of one school the boys could play in recreation time when the weather was bad and how the boy scouts were allowed to make the school their headquarters. He said the school children were to start a co-operative egg association which was sure to interest the children's parents and would give them an idea of what co-operation meant, the first principles of which were still unknown to the farmers of the county.

The business of the schools said the speaker is to serve the community and there must be as many points of contact as possible. There does not exist in Vermont to-day in any community an organization that meets the community needs. In Windsor county there are 70 neighborhoods but no neighborliness. The people do not seem to want to associate and they do not have the trust and confidence in each other that they should have. A town meeting was witnessed by the speaker recently and it was all wrangling and strife simply because those present did not understand each other. The days when men got together to raise barns and the women met for their quilting bees are gone, but there are many ways of restoring the community life with newer recreations and for different objects, all of which must come through the school. In conclusion the speaker stated that it was the intention of the Y. M. C. A. to promote holding agricultural contests in all the counties of the State in connection with the schools and that they would undoubtedly be as successful as the corn shows held last year.

Mr. Hamilton said that the formation of Parent-Teachers' associations were a way of linking together isolated groups of society which had become detached. He suggested that at the meetings of the associations some topic of interest be discussed by some qualified person of the community and on some subject that touched the school, the home or the purse. He suggested such topics as: "Being on Time," "The Cash Value of a High School Education," "Cigarette Smoking," and the like. A discussion about "Iron Ore" would probably amount to little. There should be parents' days when the parents should be welcomed to the school, the pupils work talked over and the pupil himself made a subject of discussion between parent and teacher. This should be done to establish relations between the teacher and parent and not between the parent and the pupil as opposed to the teacher. The accommodations of the school building should be considered when a though of forming an association arises, and the question of the social needs of the community should be seriously considered first. Everything should be done to sustain the interest once it is started. Conditions may demand that the meetings be not held too often but when they are held they should be so interesting that they will be in demand in the community.

Miss Woodruff remarked that it was a curious fact that the community would invest so much money in costly and well equipped school buildings which were open only one-third of the time. She said that even school trustees must be first convinced of the necessity of the school as a social center and she cited an instance where the use of schools had been forbidden for any other purpose than the usual course of school instruction. We have all paid too much attention to the discussion of politics and other social questions and not enough to the future of boys and girls whose intellectual development has been the only thing provided for. This is the age of the child and the formation of his character is not in the school room or the home alone but in his hours of recreation. The schools should not be closed to them or to their parents in the hours after study.

Mrs. Smilie stated that the object of the Federation of Women's clubs had been to promote the social center and it had become a reorganized fact in this State that the logical centers were in the school houses, many of them not having more than one room. She very eloquently described the need of a community life that will make people interested in things and related experiences of her own where she had opportunity to improve the life of people in rural communities but that she had not realized it at the time. She stated that the federation was at present sending six girls to the normal school and that they were to teach at least two years in a schoolhouse in a strictly rural community and where there was only one room to the school. Mrs. Smilie's earnest remarks were listened to with marked attention. She concluded with the statement that we would undoubtedly some day realize results from our endeavors when we get by that curse of Vermont: "Hain't got round to it yet."

At the noon intermission the visiting teachers were entertained at luncheon at the Ethan Allen club house.

SCHOOL AND VOCATIONAL TRAINING.

"The School and Vocational Training" was the theme for discussion at the afternoon session, the address being given by Prof. G. G. Groat of the University of Vermont. Following the statement that "the fundamental basis of the issue of vocational training and the schools is to be found in the fact, equally fundamental, that in furthering human welfare society has not yet attained command over the forces of nature sufficient to warrant any relaxation in its efforts to supply wants," Professor Groat brought out the following six points: (1) A need for change in the direction of vocational training; (2) this change should be planned on true principles of sound educational theory; (3) vocational training and vocational guidance should be directly related to school activity; (4) some of this training should be done directly by and in the schools; (5) more of it through proper relation with school and industries of the locality; (6) whatever ultimate outcome as to schooling in a trade, one immediate outcome is necessary, the idea of production or work.

A general discussion of the subject brought the afternoon session to a close and an informal reception at the home of President and Mrs. Benton followed.

TRANSPORTING GREAT TREES.

Old trees from India, Africa and the Philippine Islands have been uprooted, transported by elephants, oxteams, horse and mule-power, electricity, steam and sail to the grounds of the Panama-Pacific exposition in San Francisco. The method employed is interesting, as it was at first thought impossible to accomplish this without a very large percentage of these centuries-old trees dying.

A rectangular cut is made around the base of the tree at some little distance from the edge of the trunk, severing the side roots, leaving the bottom roots only to nourish the trees. Boards are forced down into these cuts to prevent the side roots from growing together again, and the tree is then left undisturbed for six months, says Popular Mechanics. By that time the tree has become accustomed to living through its bottom roots, and these are now severed, and boards forced beneath the tree, which is then pulled over on its side. The boards are then secured into a rough box, wrapped heavily with wire rope, and the tree lifted by derrick to car or wagon, or is hauled to the shipping point by such power as is available.

Hoisted on shipboard, the tree is kept from the light, and when, weeks or months later, it arrives at the exposition ground it is living, but in a sorry condition. A place having been prepared for it in rich soil brought from forest lands on the Sacramento river, it is replanted under conditions most favorable for its continued growth. The box is removed and the tree carefully nursed for 30 days, by which time it has again fastened its roots into the earth and will, in all probability live.

WE HAVE ALL NOTICED IT.

How Delicate Woman Defies Winter Weather.

(From the St. Paul Pioneer Press.)

Nature selects this kind of weather to prove to the credulous world that woman is not the weak vessel, physically speaking, that sentimental poets would have us believe. Take yesterday, for example, when the thermometric mercury was cutting all kinds of subzero antics, and observe the representatives of the fair sex on the streets and trolley cars. Here came one with her neck enfolded in a voluminous fur wrap. But did it meet under her neck and protect her throat and chest? Not that one would notice. Carefully folded away from her throat it left bare a generous V shaped section of her chest, though perhaps in cheerful mockery the edge of the open garment might carry a fringe of fur.

Here is another whose scant-width skirt disclosed—no, not heavy artics, but low shoes, almost pumps, and thin silk stockings through which the flesh tints declared themselves. Contrast her with the puny specimen of manhood which acted as her escort. He was only six feet tall and could not have weighed as much as 180 pounds, so he required the protection of a fur cap pulled over his ears and half his face meeting the upturned collar of a heavy fur-lined coat. His delicate pedal extremities were cased in weighty lined overshoes, the third clasp of which was concealed by his nether garment.

The man shivered; the woman radiated warmth and health. Neither attracted special attention as the spectacle is not out of the ordinary. Take any one of these crisp, sparkling days and you may see it duplicated over and over again. It is an old saying that a man takes cold through his chest and a woman through her feet, but observation and experience would teach that a woman takes cold through neither.